
REMARKS

This Amendment and Reply seeks to place this application in condition for allowance. Many of the claims have been amended to correct inadvertent typographical errors, to improve grammar and/or clarity, to more fully claim the inventions, and/or to more definitely set forth the features of Applicants' invention(s). No new matter has been added.

Applicants have also added seven (7) new claims (namely claims 33-39) which are dependent (directly or indirectly) on amended claim 1. No new matter has been added.

Further, Applicants have added new apparatus independent claim 40, and claims 41-44 which depend therefrom, as well as new apparatus independent claims 45 and 46 to more fully protect the apparatus inventions described and illustrated in the application. No new matter has been added.

Moreover, Applicants have also added new claims 47-50 which substantively correlate to original claims 19-22. Claims 19-22 were found to contain allowable subject matter and would be allowed if rewritten to include all of the limitations of the base and intervening claims as well as address the antecedent basis issues raised with respect to such base and intervening claims. (Office Action, page 3, paragraph 4). It is believed that claims 47-50 are now allowable. No new matter has been added.

In addition, the instant application has been amended to include a statement that sets forth the relationship between the instant application and the foreign applications upon which priority was claimed and properly acknowledged/accepted by the USPTO. In this regard, the instant application claims priority to International Application No. PCT/EP00/07755, filed on August 10, 2000, which claims priority to German Patent

Application Nos. 199 37 706.5 and 100 04 007.1, filed on August 10, 1999 and January 29, 2000, respectively.¹ The instant application has been amended to reflect the relationship to International Application No. PCT/EP00/07755 and German priority applications. No new matter has been added.

All of the objections and rejections raised in the Office Action dated February 7, 2006 (hereinafter the "Office Action") have been addressed, in detail, below.

Specification

As requested, the undersigned has reviewed the application for possible minor typographical errors. No errors warranting correction were uncovered.

Oath/Declaration

In an effort to address the Examiner's concern regarding the Declaration, enclosed herewith is a substitute Declaration, in compliance with 37 CFR §1.67(a). The substitute Declaration also recites the Application Serial Number of the instant application. It is respectfully submitted that the attached Declaration alleviates the concerns raised in paragraph 2 of the Office Action.

Further, the substitute Declaration, like the original Declaration, claims priority to International Application No. PCT/EP00/07755, filed on August 10, 2000, which claims priority to German Patent Application Nos. 199 37 706.5 and 100 04 007.1, filed on August 10, 1999 and January 29, 2000, respectively. The instant application has been

¹ Notably, in the substitute Declaration, like the original Declaration, the Applicants claim priority to International Application No. PCT/EP00/07755, filed on August 10, 2000. Moreover, a copy of International Application No. PCT/EP00/07755, an English translation thereof, and a verification statement by the translator were filed with the instant application on February 8, 2002.

amended to reflect the relationship to International Application No. PCT/EP00/07755 and German priority applications. As such, the claim of priority is perfected. (See, 35 USC §§ 119, 120 and 365). No new matter has been added.

Claim Objections

Applicants have canceled claim 16. As such, the objection is moot.

Claim Rejection -- 35 USC §112

The Examiner has raised a concern that certain terms and/or phases lack antecedent basis or are unclear. The amendment has addressed the terms in the pending claims that lacked antecedent basis. The undersigned would like to thank the Examiner for his thorough review of the claims.

Regarding claim 1 and the issue raised as to the clarity of "an information symbol signal", claim 1 has been amended to make clear that an "output signal", which is representative of frequency spread and time spread the information symbols, is transmitted to, via the channel, and received by the receiver. It is believed that the foregoing addresses the concern regarding claim 1.

Claim Rejection -- 35 USC §101

Applicants have amended claim 1 to more clearly claim certain inventions and/or to more definitely set forth the features of Applicants' inventions. In this regard, amended claim 1 more clearly recites a method of transmitting information symbols:

frequency spreading and time spreading the information
symbols to provide an output signal;
transmitting the output signal;
receiving the transmitted output signal;

frequency de-spreading and time de-spreading the output signal to provide the information symbols; and

adaptively controlling the frequency spreading and time spreading the information symbols in relation to a transmission quality and channel characteristics;

wherein the frequency spreading of each information symbol is provided by a quasi Dirac pulse formation and subsequent filtering or by digital signal processing.

Thus, it is respectfully submitted that amended claim 1 now more clearly is directed to statutory subject matter. For the same reasons, claims 2-10, 23-30 and 32 also are more clearly directed to statutory subject matter. Reconsideration of claim 1, and the claims which depend thereon, is respectfully requested.

Notably, the prior art of record neither teaches nor suggests the method of amended claim 1. For example, Alouini et al. (US 6,304,593), Sato (US 6,414,948) and/or Sommer et al. (US 6,647,071), whether alone or in combination, do not teach or suggest, among other things, (1) transmission of information symbols, which includes frequency spreading and time spreading of the information signals at a transmitting end and a frequency de-spreading and time de-spreading at a receiving end, (2) adaptively controlling the frequency spreading and time spreading the information symbols in relation to a transmission quality and channel characteristics, wherein the frequency spreading of each information symbol is provided by a quasi Dirac pulse formation and subsequent filtering or by digital signal processing.

Claim Rejections -- 35 USC §§102 and 103

In an effort to expedite the prosecution of this Application, claims 12-18 and 31 have been deleted. As such, the rejections set forth in paragraphs 6-10 are moot.

Notably, Applicants reserve the right to present the same or similar claims to those canceled at a later date, in this application or in a divisional/continuation application.

Allowable Subject Matter

Claims 19-22 were found to be allowable if, among other things, were rewritten to include all of the limitations of the base claim and any intervening claims. (Office Action, page 13, paragraph 11). To that end, Applicants have added new claims 51-54 which substantively correlate to allowed claims 19-22. In this regard, new independent claim 47 includes all of the limitations of independent claim 12 as well as intervening claims 17 and 18. In addition, new independent claim 47 addresses the antecedent bases issues raised with respect to claims 12 and 18. (Office Action, page 3, paragraph 4). As such, it is believed that new independent claim 47, which corresponds to substance of original claim 19, is now allowable. Notably, dependent claims 48-50 correspond to claims 20-22 and, as such, it is believed that claims 48-50 are also allowable.²

Prior Art Made of Record

Applicants note the statement of prior art made of record but not relied upon. It is not clear what is the relevance of (or meant by) the comment that the prior art made of record "is considered pertinent to applicant's disclosure." (See, Office Action, pages 13-14). No inference or conclusion should be drawn that Applicants agree with the Examiner's comment. In an effort to provide a more concise response, and because the

² There are many patentable inventions described in pending dependent claims 48-50. For the sake of brevity, this response does not present the additional reasons/bases that such dependent claims are patentable over the art of record. No inference or conclusion should be drawn that this response is exhaustive.

Examiner has not rejected any of the claims based on such art, Applicants provide no comment.


CONCLUSION

Applicants respectfully request entry of the foregoing amendment and reconsideration of the instant application. Applicants submit that all of the pending claims present patentable subject matter. Accordingly, allowance of all of the claims is respectfully requested.

It should be noted that should a telephone interview expedite the prosecution of this application in any way, the Examiner is invited to contact the undersigned at the telephone number listed below.

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Respectfully submitted


Neil A. Steinberg, Reg. No. 34,735
Telephone No. 650-968-8079